

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____ NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>	
										<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
										<input type="checkbox"/> Other	

Work Order ID 102172

102172

Page 2

May-27-13 12:40:40 PM

Item ID: D2144

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Hinge Bracket

Start Date: 5/27/13 Start Qty: 5.00

5

Cust Item ID:

Required Date: 5/31/13 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date: Tooling:

Date:

Run

Start

NR1

QC:

Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Small Fab	Small Fab	0.00							
	Memo	0.00							
	Deburr if necessary								
140 *140* Brake NC	NC BRAKE	0.00							
Brake NC	Memo	0.00							
	Form as per Dwg D2144Rev: 1								
150 *150* QC	QC5- Inspect part completeness to step on W/O	0.00	DAS 27 9-89						
Quality Control	Memo	0.00							

N/A 83

8

SB
13/09/27

8

13-9-27

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date:

QA Closed: _____ **Date:** _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS									
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>							
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>							
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>							
				Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>								
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
														<input type="checkbox"/> Other	

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS								
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>							
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>								
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>								
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup													
Other													
Process													
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

Work Order ID 102172***102172***

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Item ID: D2144

Accept

N900040100

Setup

Start *NS1*

Revision ID:

Stop

NS2

Item Name: Hinge Bracket

Start Date: 5/27/13 Start Qty: 5.00

5

Cust Item ID:

Required Date: 5/31/13 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							8x8 M/F 13/10/07
200 *200* QC Quality Control	Memo START TIME: 1-30 FINISH TIME: 400 PT OVEN TEMPERATURE: 200	0.00							8x d M 13/10/07
210 *210* Packaging Packaging	Identify as per dwg & Stock Location: 0405 Memo	0.00							13/10/07 DAS 32 989

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS														
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description			Sign & Date	Verification	QC Inspector								
Doc/Data																				
Equip/Tooling																				
Operator																				
Material																				
Setup																				
Other																				
Process																				
Supplier																				
Training																				
Unapproved																				
FAULT CATEGORY																				
Landing Gear				General																
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>												
				Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>												
				Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>												
				Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>												
				Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>													
				Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>													
				Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>												
				Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>														
				Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>														
				Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>														
				Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>														

Work Order ID 102172

102172

Page 5

May-27-13 12:40:40 PM

Item ID: D2144

Accept

N900040100

Setup

Start ***NS1***

Revision ID:

Stop

NS2

Item Name: Hinge Bracket

Start Date: 5/27/13 Start Qty: 5.00

5

Cust Item ID:

Required Date: 5/31/13 Req'd Qty: 5.00

5

Customer:

Reference:

Run

Start ***NR1***

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 *220* QC Quality Control	QC21- Final Inspection - Work Order Release	0.00							<i>JF / RM 13/10/08</i>
	Memo	0.00							<i>MF 13 10 08</i>

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS									
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other								
Part No. _____ NCR No. _____															
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
														<input type="checkbox"/> Other	

Picklist Print

May-27-13 12:40:39 PM

Page 1

Work Order ID: 102172

Parent Item: D2144

Parent Item Name: Hinge Bracket

Start Date: 5/27/13

Required Date: 5/31/13

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP: D04.05.06ReformatKJ/RF
IPP Rev:E Now on Waterjet 06-10-15 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			120	sf	446.0842	0.0945	0.4725	0.126159	→ 0.756	Ak /
<hr/>													
Location				Loc Qty			Loc Code						
MAT020				446.0841688									
122245				0.1713688									
123136				140.8									
124428				23.61									
124572				25.5028									
125599				256									

DAS
21
26
B-8-10

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date:

QA Closed: _____ **Date:** _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Cross tube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	General			Bend	General			Grain	Ovalized	Pressure/Forced	
Centre Not Concentric to O/S				BOM/Route				Hardware	Over/Under tolerance	Temperature/Cure	
Cracks				Broken/Damaged				Inspection Incomplete	Part Incorrect	Weld	
Crushed/Crimped				Burrs				Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled	
Cuffs				Contamination				Maintenance	Part Moved		
Heat Treat				Countersink				Mislabeled	Positioned Wrong		
Inspection Strip in Tube				Cut Too Short				Misread	Power Loss/Surge		
Ripples in Bend				Drill Holes				Offset			
Torque Waves in Extrusion				Drawing				Out of Calibration			
Turning Sequence				Finish				Out of Sequence			
Wave/Twist in Tube				Folio				Outside Dimensions			

DART AEROSPACE LTD	Work Order:	102172
Description: Hinge Bracket	Part Number:	D2144
Inspection Dwg: D2144	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	<u>A</u>	Audited by:	<u>27</u>	Prototype Approval:	N/A
Date:	13.08.12	Date:	13.08.12	Date:	N/A

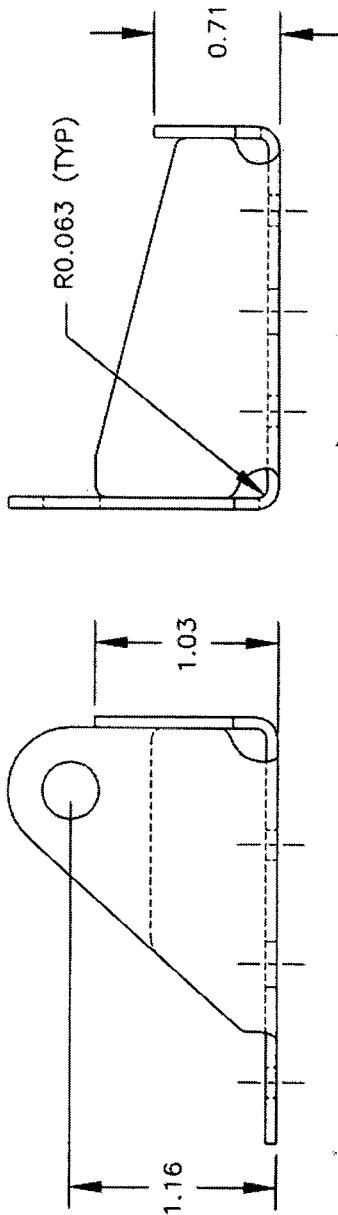
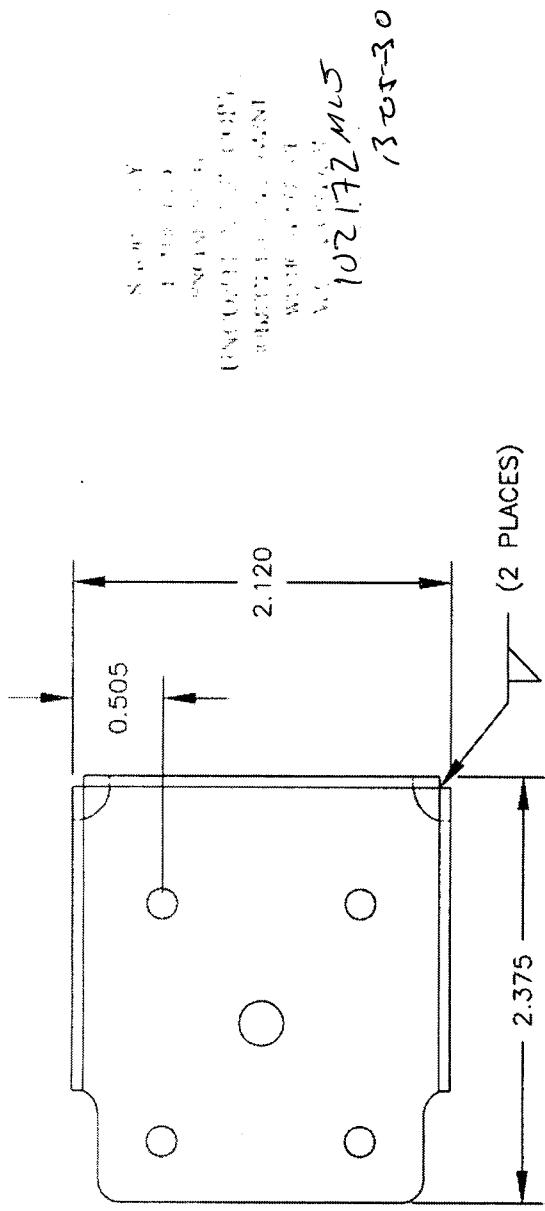
Rev	Date	Change	Revised by	Approved
A	07.05.31	New Issue	KJ/JLM	<i>[Signature]</i>

DART



DESIGN BW	DRAWN BY RE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2144	REV. D	SHEET 1 OF 2
DATE 98.10.08		TITLE HINGE BRACKET	SCALE 1:1	
A	95.03.17	NEW ISSUE		
C	96.06.05	FLAT PATTERN LAYOUT ADDED		
D	98.10.08	UPDATED DIMS AFTER BEND (TSR A917)		

RELEASED
98.10.15 RE



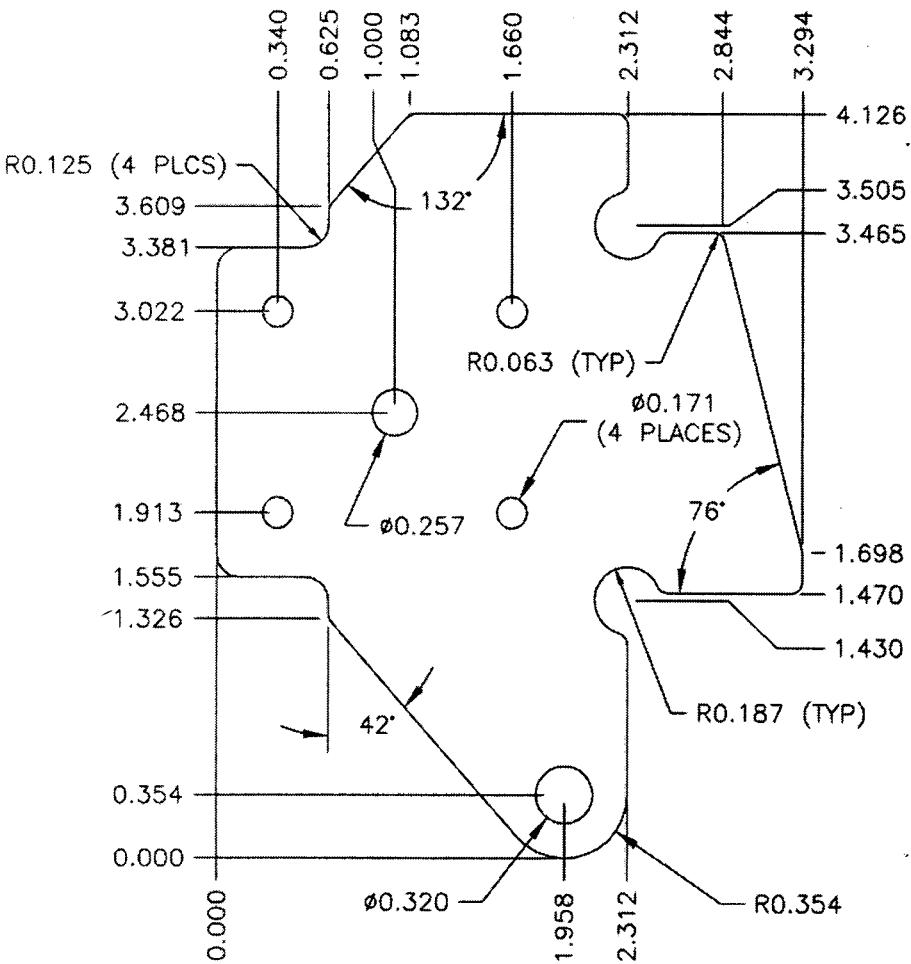
FINISH: POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
WELD PER DART QSI 004

2012/



DESIGN <i>BW</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>PA</i>	APPROVED <i>JS</i>	DRAWING NO. D2144	REV. D SHEET 2 OF 2	
DATE 98.10.08	TITLE HINGE BRACKET		SCALE 1:1	

98.10.15 LL



D2144 FLAT PATTERN

MATERIAL: AISI 304/316-2B SS, 0.063 THICK
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES